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Intellectual Property Law



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*CofC \$*  
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September 7, 2006

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

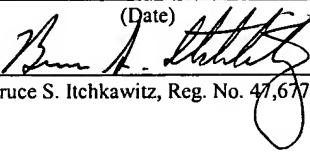
Re: Title: **METHOD OF MEASURING  
A PHYSICAL FUNCTION USING  
A COMPOSITE FUNCTION  
WHICH INCLUDES THE PHYSICAL  
FUNCTION AND AN ARBITRARY  
REFERENCE FUNCTION**  
Letters Patent No. 7,050,169 B2  
Issued: May 23, 2006  
Our Reference: STANF.131CP2

CERTIFICATE OF MAILING

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

September 7, 2006

(Date)

  
Bruce S. Itchkawitz, Reg. No. 47,677

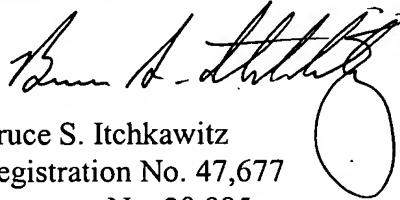
Dear Sir:

Enclosed for filing is a Certificate of Correction in connection with the above-identified patent.

As the errors cited in the Certificate of Correction were incurred through the fault of the Applicant, enclosed is our check in the amount of \$100. Please charge any additional fees to our Deposit Account No. 11-1410.

Respectfully submitted,

Knobbe, Martens, Olson & Bear, LLP

  
Bruce S. Itchkawitz  
Registration No. 47,677  
Customer No. 20,995

Enclosures

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*Certificate  
SEP 14 2006  
of Correction*

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San Diego  
619-235-8550

San Francisco  
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UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 7,050,169 B2

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APPLICATION NO. : 10/645,331

ISSUE DATE : May 23, 2006

INVENTORS : Aydogan Ozcan et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On Page 2, Col. 1 ("U.S. Patent Documents"), line 15, after 6,650,486, delete -- **B1** -- and insert -- **B2** --.

On Page 2, Col. 1 ("U.S. Patent Documents"), line 16, after 6,856,393, delete -- **B1** -- and insert -- **B2** --.

On Page 2, Col. 1 ("Other Publications"), line 9, delete -- **techique** -- and insert -- **technique** --.

On Page 2, Col. 1 ("Other Publications"), line 18, after **Ozcan**, delete -- **A.** -- and insert -- **A.**, --.

On Page 2, Col. 2 ("Other Publications"), line 7, delete -- **Search.** -- and insert -- **Search.** --.

On Page 2, Col. 2 ("Other Publications"), line 8, delete -- **Marker** -- and insert -- **Marker** --.

On Page 2, Col. 2 ("Other Publications"), line 14, delete -- **(1988)**, -- and insert -- **(1998)**, --.

On Page 2, Col. 2 ("Other Publications"), line 29, after **SPIE**, insert -- , --. [comma]

On Page 2, Col. 2 ("Other Publications"), line 48, delete -- **Fringes** -- and insert -- **fringes** --.

On Sheet 2 of 39, Box 140 (Fig. 2), Line 1, delete -- **NONLINEARIITY** -- and insert -- **NONLINEARITY** --.

In Col. 2, line 30, delete --  $f(\theta n_1, n_2)$  -- and insert --  $f(\theta, n_1, n_2)$  --.

In Col. 4, line 51, delete -- **obtaines** -- and insert -- **obtains** --.

In Col. 8, line 64, delete -- **n.** -- and insert -- **n.** --.

In Col. 9, line 1, delete -- **n.** -- and insert -- **n.** --.

In Col. 9, line 43, delete -- **20 180°** -- and insert -- **20 at 180°** --.

In Col. 15, line 45, delete -- **LG** -- and insert -- **L<sub>G</sub>** --.

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PTO/SB/44 Equivalent

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In Col. 15, lines 57-58 (approx.), delete Equation 8 as set out in the patent grant, and insert

$$-- MF_{S1} = |D^{S1}(f)|^2 = |D_A(f) - D_B(-f)|^2 = |D_A(f)|e^{j\phi_A(f)} - |D_B(f)|e^{-j\phi_B(f)}|^2 --.$$

In Col. 15, line 60 (approx.), delete Equation 9 as set out in the patent grant, and insert

$$-- MF_{S2} = |D^{S2}(f)|^2 = |D_A(f) + D_B(f) \cdot e^{-j2\pi fL}|^2 = |D_A(f)| \cdot e^{j\phi_A(f)} + |D_B(f)| \cdot e^{j[\phi_B(f) - \phi_0(f)]}|^2 --.$$

In Col. 15, line 64 (approx.), delete -- MF<sub>S1</sub> and MF<sub>S2</sub> -- and insert -- MF<sub>S1</sub> and MF<sub>S2</sub> --.

In Col. 15, line 65, delete Equation 10 as set out in the patent grant, and insert

$$-- MF_{S1} = |D_A|^2 + |D_B|^2 - 2|D_A||D_B|\cos(\phi_A + \phi_B) --.$$

In Col. 15, line 67 (approx.), delete Equation 11 as set out in the patent grant, and insert

$$-- MF_{S2} = |D_A|^2 + |D_B|^2 + 2|D_A||D_B|\cos(\phi_A - \phi_B + \phi_0) --.$$

In Col. 16, line 24 (approx.), delete Equation 14 as set out in the patent grant, and insert

$$-- \phi_A + \phi_B = 2\pi \cdot m \pm \left| \cos^{-1} \left( \frac{\alpha}{\Delta} \right) \right| --.$$

In Col. 19, line 9 (approx.), after **magnitude**, insert -- of --.

In Col. 19, line 24 (approx.), after **magnitude of**, delete -- (i.e., the Fourier transform magnitude of --).

In Col. 20, line 1, delete -- y -- and insert -- yield --.

In Col. 20, line 18 (approx.), delete --  $\frac{1}{2}|D_A|P_1$  and  $2|D_A|P_2$  -- and insert --  $\frac{1}{2}|D_A|P_1$  and  $\frac{1}{2}|D_A|P_2$  --.

In Col. 20, line 24 (approx.), delete the equation following the word **measured** and before the word **data**, and insert --  $MF_1(f) = |D_A(f)|^2$  --.

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In Col. 21, line 31, delete the equation following the words **Equation 2**, and insert  
--  $MF_{S1} = 4|D_A|^2 \sin^2(\phi_A)$  --.

In Col. 21, line 44, delete the symbols following i.e., and insert --  $MF_{S1} = 4|D_A|^2 \sin^2(\phi_A)$  --.

In Col. 21, line 45, delete the symbols following the word **of** and before the period, and insert  
--  $d(z) - d(-z)$  is  $2j|D_A| \sin(\phi_A)$  --.

In Col. 21, line 53, delete -- **dz** -- and insert -- **d(z)** --.

In Col. 21, line 58, delete -- **nonlinearity** -- and insert -- **nonlinearity** --.

In Col. 23, line 30 (approx.), delete -- **dS2(z)**, -- and insert -- **ds2(z)**, --.

In Col. 23, line 32 (approx.), delete Equation 28 as set out in the patent grant, and insert  
--  $MF_{S1} = |D_A|^2 + |D_B|^2 - 2|D_A||D_B| \cos(\phi_A + \phi_B + \phi_1)$  --.

In Col. 23, line 34 (approx.), delete Equation 29 as set out in the patent grant, and insert  
--  $MF_{S2} = |D_A|^2 + |D_B|^2 + 2|D_A||D_B| \cos(\phi_A - \phi_B + \phi_2)$  --.

In Col. 23, line 37 (approx.), delete the equation following the word **and**, and insert --  $\phi_2(f) = 2\pi fL$  --.

In Col. 23, line 43 (approx.), delete -- **MFS2** -- and insert -- **MFs2** --.

In Col. 24, line 8, after  $MF_B$ , insert --, --. [comma]

In Col. 24, line 10, delete --  $z < 0$  -- and insert --  $z \leq 0$  --.

In Col. 26, line 10, delete -- **220,a** -- and insert -- **220, a** --.

In Col. 26, line 12, delete -- **230,an** -- and insert -- **230, an** --.

In Col. 27, line 41, delete --  $\int_{pump,1}$  -- and insert --  $\omega_{pump,1}$  --.

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In Col. 29, line 22, delete Equation 41 as set out in the patent grant, and insert  
--  $u_{out}(t) \approx u_r(t) * u_r(-t) * u_s(t) e^{j\bar{K}_r \bar{r}} + u_r(t) * u_r(t) * u_s(-t) e^{j\bar{K}_r \bar{r}}$  --.

In Col. 29, line 64, delete -- **produ<sub>c</sub>t** -- and insert -- **product** --.

In Col. 30, line 27 (approx.), delete Equation 45 as set out in the patent grant, and insert  
--  $E_{2\omega}(t) = u_{2\omega}(t) e^{j2\omega t} = \eta u_1(t) u_2(t) e^{j2\omega t} = \eta u_1(t) u_1(t - \tau) e^{-j\omega \tau} e^{j2\omega t}$  --.

In Col. 30, line 30, delete the symbol following the word **where** and before the word **is** as set out in the patent grant, and insert --  $\eta$  --.

In Col. 30, line 30, after **to**, delete -- , --. [comma]

In Col. 30, line 51 (approx.), delete Equation 47 as set out in the patent grant, and insert  
--  $\bar{A}_{PMT\_single}(f) = |\eta|^2 |\bar{I}(f)|^2$  --.

In Col. 31, line 34, delete -- **At** -- and insert -- **At** --.

In Col. 31, line 60 (approx.), delete Equation 50 as set out in the patent grant, and insert  
--  $\bar{A}_{PMT\_double}(f) = 2|\eta|^2 |\bar{I}(f)|^2 |1 + \cos(2\varphi(f) - f\Delta t)|$  --.

In Col. 32, line 13, delete the symbols following the word **signal** and before the word **recorded**, and insert --  $A_{PMT\_single}(\tau)$  --.

In Col. 32, line 33, delete the symbols following the words **magnitude of** and before the words **(expressed by**, and insert --  $\bar{A}_{PMT\_double}(f)$  --.

In Col. 32, line 35, delete the symbols following the word **measured** and before the period, and insert  
--  $A_{PMT\_double}(\tau)$  --.

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In Col. 32, line 36, delete the symbols following the word **measured** and before the words **is a**, and insert --  $A_{PMT\_double}(\tau)$  --.

In Col. 32, line 38, delete the symbols following the word **signal** and before the word **measured**, and insert --  $A_{PMT\_single}(\tau)$  --.

In Col. 32, line 41 (approx.), delete the symbols following the word **measured** and before the words **(i.e., from . . . ,** and insert --  $A_{PMT\_double}(\tau)$  --.

In Col. 33, line 43 (approx.), delete the symbols following the word **transform** and before the words **is equivalent**, and insert --  $\tilde{I}_{symmetric}(f)$  --.

In Col. 33, line 48 (approx.), after -- **(i.e., --**, delete -- **(i.e., --**.

In Col. 34, line 13 (approx.), delete -- **su, h** -- and insert -- **such** --.

In Col. 34, line 23 (approx.), delete Equation 52 as set out in the patent grant, and insert --  $u_s(t) = \tilde{u}_s(t) e^{j\omega_c t}$  --.

In Col. 34, line 25 (approx.), delete the symbols following the word **where** and before the words **is the**, and insert --  $\tilde{u}_s(t)$  --.

In Col. 34, line 28 (approx.), delete Equation 53 as set out in the patent grant, and insert --  $u_s(t) = \int \tilde{U}_s(\omega - \omega_c) e^{j\omega t} d\omega$  --.

In Col. 34, line 31 (approx.), delete the symbols following the word **where** and before the word **denotes**, and insert --  $\tilde{U}_s(\omega)$  --.

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In Col. 34, line 31 (approx.), delete the symbols following the words **transform of** and before the period, and insert - -  $\tilde{u}_s(t)$  - -.

In Col. 34, line 33 (approx.), delete the symbols following the words **with amplitudes**, and insert - -  $\tilde{U}_s(\omega - \omega_c)$  - -.

In Col. 34, line 36, delete the symbols following - - (i.e. - -, and insert - -  $\tilde{U}_s(\omega - \omega_c)e^{j\omega}$  - -.

In Col. 34, line 40, delete the symbols following the word **harmonic** and before the words **at the plane**, and insert - -  $\tilde{U}_s(\omega - \omega_c)e^{j\omega}$  - -.

In Col. 35, line 26 (approx.), delete Equation 57 as set out in the patent grant, and insert - -  $u_{2s}(x';t) = \int \tilde{U}_{2s}(x';\omega,t)d\omega$  - -.

In Col. 35, line 47 (approx.), delete Equation 59 as set out in the patent grant, and insert - -  $u_{total}(t) = (\tilde{u}_s(t) + \tilde{u}_s^*(-t - \Delta t))e^{j\omega_c t}$  - -.

In Col. 36, line 1, delete the equation following the word **Defining** and before the word **and**, and insert - -  $\tilde{U}_s(\omega) = |\tilde{U}_s(\omega)|e^{j\Phi(\omega)}$  - -.

In Col. 36, line 41, delete the symbols following the word **function** and before the comma, and insert - -  $\tilde{u}_s(t)$  - -.

In Col. 36, line 47 (approx.), delete the symbols following the word **function** and before the words **to be characterized**, and insert - -  $\tilde{u}_s(t)$  - -.

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In Col. 37, line 9, delete the symbols following the word **function** and before the comma, and insert

--  $\tilde{u}_s(t)$  --.

In Col. 37, line 11, delete the symbols following the word **function** and before the words **can be**, and insert --  $\tilde{u}_s(t)$  --.

In Col. 37, line 27 (approx.), delete the symbols following the word **function** and before the words **of any**, and insert --  $\tilde{u}_s(t)$  --.

In Col. 38, line 36, delete -- **su<sub>c</sub>h** -- and insert -- **such** --.

In Col. 39, line 18 (approx.), delete Equation 66 as set out in the patent grant, and insert --  $I_{C2}(t) = I_A(t) + I_B(-t + \tau_2)$  --.

In Col. 39, line 20, delete -- **r2** -- and insert --  $\tau_2$  --.

In Col. 39, line 53 (approx.), delete the symbols following the word **and** and before the words **a time**, and insert --  $\tau$  is --.

In Col. 39, line 58 (approx.), delete Equation 68 as set out in the patent grant, and insert --  $|I_c(f)|^2 = |I(f)|^2 + |I_{Ref}(f)|^2 + 2|I_{Ref}(f)||I(f)|\cos(\phi - \phi_{Ref} + \phi_0)$  --.

In Col. 39, line 60, delete the equation following the word **where** and before the words **is the Fourier**, and insert --  $I(f) = |I(f)|e^{j\phi}$  --.

In Col. 39, line 63, delete the symbols following the word **with** and before the period, and insert --  $\phi_0 = 2\pi f\tau$  --.

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In Col. 40, line 7, delete the symbols following the words **transforms of** and before the word **and**, and insert --  $[I(f)^2 + |I_{Ref}(f)|^2] --$ .

In Col. 40, line 11, delete the symbols following the word **both** and before the word **and**, and insert --  $[I(f)^2 + |I_{Ref}(f)|^2] --$ .

In Col. 40, line 20, delete the symbols following the word **quantities** and before the word **and**, and insert --  $[I(f)^2 + |I_{Ref}(f)|^2] --$ .

In Col. 40, line 31, delete -- **q** -- and insert -- **φ** --.

In Col. 42, line 30, delete -- **first-reference** -- and insert -- **first reference** --.

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